

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A stump grinding machine that is configured to mount to a powered vehicle, said stump grinding machine being operable to grind a stump and comprising:
 - a disc mount mounted at a mounting portion of the powered vehicle and pivotable about a generally horizontal axis; and
 - a grinding disc rotatably mounted to said disc mount and rotatable about a disc axis, said grinding disc having a plurality of grinding teeth on a face of said disc, said grinding disc being rotatably drivable by a rotational drive device connected to said grinding disc and to a power source of the powered vehicle, said disc mount being pivotable about said generally horizontal axis to arcuately move said grinding disc as said grinding disc is rotatably driven via said rotational drive device to grind a stump.
2. The stump grinding machine of claim 1, wherein said rotational drive device comprises a telescopic drive shaft connected to said grinding disc and to a power takeoff of the powered vehicle, said telescopic drive shaft defining a shaft axis that is adjustable relative to said disc axis, a length of said telescopic drive shaft being adjustable during arcuate movement of said grinding disc.
3. The stump grinding machine of claim 1 including a mounting frame configured to connect to the mounting portion of the powered vehicle and to extend generally horizontally therefrom, said disc mount being pivotally mounted to said mounting frame.
4. The stump grinding machine of claim 3, wherein said mounting frame is configured to be cantileverly supported at the powered vehicle, said mounting frame and said disc mount being entirely supportable at the powered vehicle.
5. The stump grinding machine of claim 3, wherein said mounting frame comprises a base portion attachable to the powered vehicle and a support portion mounted at one end to said base portion and extending generally horizontally from said base portion, said disc mount being pivotally attached to an opposite end of said support portion from said base portion.

6. The stump grinding machine of claim 5, wherein said support portion is pivotally mounted to said base portion and is pivotable about a generally vertical axis.
7. The stump grinding machine of claim 6, wherein said support portion is pivotable about said generally vertical axis via a first actuator and said disc mount is pivotable about said generally horizontal axis via a second actuator.
8. The stump grinding machine of claim 1, wherein said face of said grinding disc comprises a front face that is facing generally toward the powered vehicle when said stump grinding machine is connected to the powered vehicle.
9. The stump grinding machine of claim 1, wherein said face of said grinding disc comprises a rear face that is facing generally away from the powered device when said stump grinding machine is connected to the vehicle.
10. The stump grinding machine of claim 1, wherein said stump grinding machine is configured to mount to a powered tractor.
11. The stump grinding machine of claim 1, wherein said stump grinding machine is configured to mount to a support arm of a skid steer.
12. The stump grinding machine of claim 1, wherein said disc mount is pivotally mounted to the mounting portion of a support arm extending from the powered vehicle and defining the mounting portion of the powered vehicle.
13. The stump grinding machine of claim 12, wherein said disc mount comprises a shroud portion that houses said grinding disc and a mounting bracket that is pivotally mounted to the mounting portion of the support arm of the powered vehicle.
14. The stump grinding machine of claim 13, wherein said shroud portion is pivotally mounted to said mounting bracket and is pivotable about a second generally horizontal axis.
15. The stump grinding machine of claim 14, wherein said shroud portion is biased toward an initial position relative to said mounting bracket via at least one biasing member.

16. The stump grinding machine of claim 15, wherein said shroud portion is pivotable about said second generally horizontal axis away from said initial orientation in response to said grinding disc being moved into engagement with a stump via movement of the powered vehicle relative to the stump, said at least one biasing member being configured to urge said grinding disc into and at least partially through the stump to grind the stump after the vehicle is stopped.

17. The stump grinding machine of claim 13, wherein said mounting bracket is pivotable about said horizontal axis in response to an actuator that is connectable between the support arm and said mounting bracket.

18. The stump grinding machine of claim 1, wherein said disc mount is biased toward an initial orientation, said disc mount pivoting about said horizontal axis away from said initial orientation in response to said grinding disc being moved into engagement with a stump via movement of the vehicle relative to the stump.

19. The stump grinding machine of claim 18, wherein disc mount is biased to urge said grinding disc into and at least partially through the stump to grind the stump after the vehicle is stopped.

20. The stump grinding machine of claim 1, wherein said rotational drive device comprises a rotational drive motor mounted to said disc mount and drivably connected to said grinding disc, said drive motor being connected to the power source of the powered vehicle.

21. The stump grinding machine of claim 1, wherein said grinding disc includes a plurality of depth guides positioned on said face of said grinding disc, said depth guides limiting the depth of cut of said grinding teeth as said grinding disc is rotated and engaged with a stump.

22. The stump grinding machine of claim 21, wherein said depth guides comprise blocks spaced along a radial path on said face of said grinding disc.

23. The stump grinding machine of claim 21, wherein said depth guides are adjustably mounted to said grinding disc to adjust a depth of cut of said grinding teeth.
24. The stump grinding machine of claim 21, wherein said depth guides include a cutting edge along a forward edge thereof.
25. The stump grinding machine of claim 1, wherein said plurality of teeth are spaced radially along said face of said grinding disc.
26. A stump grinding machine that is configured to mount to a powered vehicle, said stump grinding machine being operable to grind a stump and comprising:
a mounting frame configured to connect to the vehicle and to extend generally outwardly therefrom, said mounting frame extending outward from the vehicle and being supported entirely at the vehicle;
a disc mount supported at said mounting frame; and
a grinding disc rotatably mounted to said disc mount, said grinding disc having a plurality of grinding teeth on a face of said disc, said grinding disc being rotatably drivable by a rotational drive device connected to said grinding disc and to a power source of the powered vehicle, said grinding disc including a plurality of depth guides positioned on said face of said grinding disc, said depth guides limiting the depth of cut of said grinding teeth as said grinding disc is rotated and engaged with a stump.
27. The stump grinding machine of claim 26, wherein said depth guides comprise blocks spaced along a radial path on said face of said grinding disc.
28. The stump grinding machine of claim 27, wherein said depth guides are adjustably mounted to said grinding disc to adjust a depth of cut of said grinding teeth.
29. The stump grinding machine of claim 28, wherein said depth guides are adjustably mounted via at least one shim plate removably positioned between said depth guide and said face of said grinding disc.
30. The stump grinding machine of claim 27, wherein said depth guides include a cutting edge along a forward edge thereof.

31. The stump grinding machine of claim 26, wherein said disc mount is pivotable about a generally horizontal axis relative to said mounting frame to arcuately move said grinding disc as said grinding disc is rotatably driven via said rotational drive device to grind a stump.

32. The stump grinding machine of claim 31, wherein said mounting frame comprises a base portion attachable to the vehicle and a support portion mounted at one end to said base portion and extending generally horizontally from said base portion, said disc mount being pivotally attached to an opposite end of said support portion from said base portion.

33. The stump grinding machine of claim 32, wherein said support portion is pivotally mounted to said base portion and is pivotable about a generally vertical axis.

34. The stump grinding machine of claim 31, wherein said mounting frame is configured to pivotably connect to a mounting portion of the vehicle and is pivotable about a second generally horizontal axis when connected to the mounting portion of the vehicle.

35. A stump grinding machine that is configured to mount to a powered vehicle, said stump grinding machine being operable to grind a stump and comprising:

- a mounting frame configured to connect to the vehicle;

- a support frame having first and second ends, said first end being pivotally connected to said mounting frame and pivotable about a generally vertical pivot axis, said support frame being cantileverly supported at said first end and extending generally horizontally from said mounting frame;

- a disc mount pivotally mounted to said second end of said support frame and being pivotable about a generally horizontal axis, said disc mount extending downwardly from said support frame; and

- a grinding disc rotatably mounted at said disc mount, said grinding disc having a plurality of grinding teeth on a face of said grinding disc, said grinding disc being rotatably drivable by a rotational drive device connected to said grinding disc and a power source of the powered vehicle, said disc mount being pivotable about said generally horizontal axis to arcuately move said grinding disc as said grinding disc is rotatably driven via said drive device to grind a stump.

36. The stump grinding machine of claim 35, wherein said rotational drive device comprises a telescopic drive shaft connected between said grinding disc and a power takeoff of the vehicle, a shaft axis of said telescopic drive shaft being adjustable relative to a disc axis of said grinding disc and relative to an axis of the power takeoff of the vehicle and a length of said telescopic drive shaft being adjustable during arcuate movement of said grinding disc.
37. The stump grinding machine of claim 35, wherein said support frame is pivotable about said generally vertical axis via a first actuator and said disc mount is pivotable about said generally horizontal axis via a second actuator.
38. The stump grinding machine of claim 35, wherein said grinding disc includes a plurality of depth guides positioned on said front face of said grinding disc, said depth guides limiting the depth of cut of said grinding teeth as said grinding disc is rotated and engaged with a stump.
39. The stump grinding machine of claim 38, wherein said depth guides are adjustably mounted to said grinding disc to adjust a depth of cut of said grinding teeth.
40. A grinding disc for use with a stump grinding machine, said grinding disc being rotatably driven by a drive shaft of the stump grinding machine to grind a stump, said grinding disc comprising:
- a generally circular plate portion having a grinding face and a center axis;
 - a plurality of grinding teeth arranged on said grinding face at varying radial distances from said center axis, said grinding teeth extending generally axially from said grinding face; and
 - a plurality of depth guides positioned on said grinding face and extending generally axially therefrom, said depth guides extending a lesser amount from said grinding face than said grinding teeth, said depth guides limiting the depth of cut of said grinding teeth as said grinding disc is rotatably driven by the drive shaft and engaged with a stump.
41. The grinding disc of claim 40, wherein said depth guides comprise blocks spaced along a radial path on said grinding face of said plate portion.

42. The grinding disc of claim 40, wherein said depth guides are adjustably mounted to said plate portion to adjust a depth of cut of said grinding teeth.

43. The grinding disc of claim 42, wherein said depth guides are adjustably mounted via at least one shim plate removably positioned between said depth guide and said grinding face.

44. The grinding disc of claim 40, wherein said depth guides include a cutting edge along a forward edge thereof.

45. The grinding disc of claim 40, wherein said grinding teeth are removably mounted to said plate portion.